

UNITED STATES DISTRICT COURT
DISTRICT OF NEVADA

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I. Introduction

This is a claim construction order for United States Patents numbers 7,099,934; 7,043,543; 7,141,461; 6,741,442; and 7,141,891.¹ The parties have submitted twenty-three terms and phrases for construction. A technology tutorial, a two-day *Markman* claim construction hearing, a full round of claim construction briefing on each party's patents, and a full round of briefing on proposed orders submitted by each party preceded this order.

Plaintiff and Counterdefendant Server Technology, Inc. (hereinafter “STI”) manufactures products relating to computerized data center power management, including intelligent power

¹This order will hereinafter refer to each patent as the “XYZ patent,” where XYZ refers to the last three digits of the number identifying the patent (e.g., the ‘934 patent).

1 distribution systems. (Compl. (Doc. #21²) 2.) STI brought this lawsuit alleging that Defendant
 2 and Counterclaimant American Power Conversion Corp. (hereinafter “APC”) is directly and/or
 3 indirectly infringing various claims of its ‘934, ‘543, and ‘461 patents. (*Id.* at 3-5.) STI seeks to
 4 enjoin APC’s allegedly willful infringement and recover money damages. Like STI, APC
 5 manufacturers intelligent power distribution systems. APC generally denies STI’s allegations and
 6 counterclaims that STI is directly and/or indirectly infringing its ‘442 and ‘891 patents. (Answer
 7 and Counterclaims (Doc. #44) 3-4.) APC seeks declaratory relief that STI’s patents are invalid and
 8 unenforceable and for noninfringement. Furthermore, it seeks to enjoin STI’s allegedly willful
 9 infringement and recover money damages.

10 After carefully considering the briefs and other materials submitted by the parties, the
 11 record before the court, and the arguments of counsel at the claim construction hearing, the court
 12 issues this order construing the disputed claim terms.

13 **II. Legal Standard**

14 “It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to
 15 which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312
 16 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*,
 17 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Accordingly, the purpose of claim construction is to
 18 “determin[e] the meaning and scope of the patent claims asserted to be infringed.” *Markman v.*
 19 *Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370
 20 (1996). The court, rather than the jury, must resolve a dispute raised by the parties regarding the
 21 proper scope of the claims. *O2 Micro Intern. Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d
 22 1351, 1360 (Fed. Cir. 2008) (citations omitted).

23 The “objective baseline from which to begin claim interpretation” is “the ordinary and
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25 ² Refers to the court’s docket number.
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1 customary meaning of a claim term.” *Phillips*, 415 F.3d at 1312-13. This refers to “the meaning
 2 that the term would have to a person of ordinary skill in the art in question at the time of the
 3 invention.” *Id.* at 1313. The patent is read “not only in context of the particular claim in which the
 4 disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

5 In certain cases, “the ordinary meaning of claim language as understood by a person of skill
 6 in the art may be readily apparent even to lay judges, and claim construction in such cases involves
 7 little more than the application of the widely accepted meaning of commonly understood words.”
 8 *Id.* at 1314. In other cases, the claim term may have a particular meaning in the field of art that is
 9 not immediately clear. The court must examine those sources available to the public to show what
 10 a person skilled in the art would have understood the disputed claim language to mean. *Id.* Those
 11 sources include “words of the claims themselves, the remainder of the specification, the
 12 prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning
 13 of technical terms, and the state of the art.” *Id.*

14 The claim language bears considerable importance to the claim interpretation. *Vitronics v.*
 15 *Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The claims themselves can provide
 16 substantial guidance to the meaning of a claim. *Phillips*, 415 F.3d at 1314-15. The “context in
 17 which a term is used in the asserted claims can often illuminate the meaning of the same term in
 18 other claims.” *Id.* at 1314. Furthermore, “the presence of a dependent claim that adds a particular
 19 limitation gives rise to a presumption that the limitation in question is not present in the
 20 independent claim.” *Id.* at 1315.

21 The claims must also be read in view of the specification. “[T]he specification ‘is always
 22 highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best
 23 guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics*, 90 F.3d at 1582). The
 24 specification, as required by statute, describes the process of making and using the invention, and
 25 “[t]hus claims must be construed so as to be consistent with the specification, of which they are a

1 part.” *Merck & Co. v. Teva Pharm. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003). When
 2 scrutinizing the specification, however, a court must distinguish “between using the specification
 3 to interpret the meaning of a claim and importing limitations from the specification into the
 4 claim.” *Phillips*, 415 F.3d at 1323. Only the former is permissible.

5 Additionally, the court may also consider the prosecution history, which includes the record
 6 of proceedings before the Patent and Trademark Office (hereinafter “PTO”), including any
 7 references to prior art cited during prosecution. *Id.* at 1317. The prosecution history can
 8 demonstrate how the PTO and the inventor understood the patent. *Id.* In particular, the court
 9 should exclude any interpretation disclaimed by the inventor during the patent’s examination.
 10 *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005). The purpose of this rule is to
 11 “protect[] the public’s reliance on definitive statements made during prosecution by precluding
 12 patentees from recapturing through claim interpretation specific meanings [clearly and
 13 unmistakably] disclaimed during prosecution.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d
 14 1314, 1323-24 (Fed. Cir. 2003) (citations and internal quotations omitted).

15 Finally, a court may also consider extrinsic evidence, such as dictionaries, expert and
 16 inventor testimony, and learned treatises to construct a claim term. *Phillips*, 415 F.3d at 1317,
 17 1319. However, their use should be limited to edification purposes: “while extrinsic evidence can
 18 shed useful light on the relevant art, the Federal Circuit has explained that it is less significant than
 19 the intrinsic record in determining the legally operative meaning of claim language.” *Id.* at 1317
 20 (citations and internal quotations omitted).

21 Based on the foregoing principles, the court will examine the disputed claim terms
 22 appearing in the patents in suit.

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III. The Patents Generally

A. STI's Patents

STI's patents in suit ('934, '543, and '461) describe power management systems and methods. Power management systems enable a user to locally or remotely control and monitor the power supply to appliances connected to a computer network, such as computers, servers, routers, and other electronic equipment. (STI's Am. Opening Claim Cnstrctn. Br. (Doc. #127) 1-4.) The patents describe a power distribution unit (PDU) consisting of a plugstrip body that receives power from an external power supply. The PDU plugstrip body has several electrical power outlets that can power a connected appliance. Relays and switches in the PDU control power flowing to the outlets. The relays can be connected to an intelligent circuit through which a user can submit operating commands that control power distribution to the outlets.

Network appliances can often freeze or crash. Besides interrupting the operation of the network, this requires service personnel to be dispatched to reboot the frozen or crashed appliances. To address this problem, STI's inventions allow users to remotely test, control, and monitor the supply of power to a networked appliance and reboot the appliances remotely when necessary. Prior art PDUs were enabled with computing and networking capabilities so they could be remotely controlled and monitored. According to STI, its inventors introduced a local power information display to the PDU housing that allowed the redundant reporting of power information, such as current flow.

B. APC's Patents

APC's patents ('442 and '891) also relate to intelligent power distribution systems or intelligent power strips. Like the STI patents, APC's patents describe a group of power outlets into which electronic equipment can be plugged into for receiving electrical power. (APC's Opening Claim Cnstrctn Br. (Doc. #93) 3-6.) Unlike ordinary power strips, intelligent power strips feature relays and control circuitry (such as a microcontroller chip) that allow the strip to

1 power-on and power-off individual outlets. This allows a user to manage the distribution of power
2 to equipment plugged into the power strip. APC's intelligent power strips are often used to power
3 networked computer server equipment.

4 The patents teach two features to ensure an adequate power supply to the microcontroller
5 chip controlling the plugstrip. First, a redundant power source is provided to the microcontroller
6 through a sensor circuit. Second, an undervoltage sensor prevents the voltage supplied to the
7 microcontroller from falling below a predetermined threshold value. The sensor temporarily
8 disables the microcontroller, preventing it from operating erratically during a brownout condition.

9 Additionally, the inventions incorporate features to avoid overloading the power strip and
10 thereby causing a circuit breaker trip. A current sensor monitors the total input current to the
11 power strip. When the strip detects that input current is reaching an unsafe level, the control
12 circuitry can take steps to reduce the current drawn by the power strip, such as turning off outlets
13 that power non-essential equipment. As a result, a circuit breaker trip is averted and essential
14 equipment powered by the strip receives steady power.

15 **IV. Claim Construction**

16 The parties request the court to construe various terms appearing in the patents in suit.
17 Generally speaking, the court will follow the order in which those terms are listed in the parties'
18 Joint Claim Construction Chart (Doc. #80, Ex. A). Where it would be helpful, representative
19 claims are reproduced at the beginning of the discussion for each patent with added emphasis on
20 the claims or terms in dispute.

21 **A. The '934 Patent**

22 *Claim 1:*

23 A power management method comprising:

24 providing power to a power input of a local power distribution apparatus comprising
25 (i) a vertical housing vertically mounted to a vertical electrical equipment rack, (ii) a
power input penetrating the vertical housing, and
(iii) a plurality of power outlets penetrating the vertical housing and connected to an

1 associated plurality of electrical appliances mounted in the vertical electrical equipment
 2 rack or another vertical electrical equipment rack;
 3 with a **sensor system** mounted in the local power distribution apparatus,
 4 **(A) sensing whether at least one power outlet mounted in the local power**
distribution apparatus and in communication with the sensor is configured either
(I) in the “off” state or (ii) in the “on” state, and also (B) sensing whether current
is flowing through said at least one power outlet; generating at least one power
status signal with the local power distribution apparatus based on said sensing by the
sensor system;
 6 communicating the **power status signal** from the **sensor system** to a power manager
 7 system associated with the local power distribution apparatus;
 8 based on the **power status signal** received by the power manager system from the
 9 **sensor system**, transmitting **power outlet status information** in TCP/IP format from
 10 the local power distribution apparatus over a TCP/IP compatible network to a remote
 11 network management system;
 12 transmitting an outlet on/off state signal in TCP/IP format from the remote network
 13 management system through the TCP/IP compatible network to the local power
 14 distribution apparatus; and
 15 based on a selected power outlet in the local power distribution apparatus indicated by
 16 the outlet on/off state signal, transmitting an off-on cycle signal from the power
 17 manager system and, in response to said transmitting, cycling off and on the selected
 18 power outlet in the local power distribution apparatus.

15 ‘934 Patent col.53 l.14 - col.54 l.7 (emphasis added).

16 1. Sensor system

PROPOSED CONSTRUCTIONS ³	
STI	System that relates to sensors
APC	Sensor circuitry including (1) at least one power-on sensor (i.e., voltage monitor) connected to the output side of the relay associated with a power outlet and (2) at least one load sensor (i.e., current monitor) uniquely associated with that same power outlet.

21 The parties dispute whether this claim term requires two types of sensors, referred to as
 22 “power-on” and “load” sensors. The disagreement arises from the parties’ differing interpretations
 23 of the prosecution history. During prosecution of the ‘934 patent in 2005, the PTO examiner
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 26 ³ The parties’ proposed constructions are taken from their proposed claim construction orders (Doc. #147 and
 148).

1 initially rejected application claim 15 (which ultimately issued as claim 1 in the patent) as
 2 anticipated by U.S. Patent Application No. 20030200473 to Fung et al. (“Fung”), which also
 3 claims a sensor system. In an appeal to the PTO, STI responded to this rejection by distinguishing
 4 the sensor system claimed by Fung on various grounds. Among the statements made by the
 5 applicants was the following: “The Office Action also misconstrued, and did not apply, the
 6 claimed sensors in the claimed sensor system. Reading the claims in view of the specification can
 7 allow no conclusion other than that the claimed sensors in the claimed sensor system include
 8 ‘power-on’ and ‘load sensors.’” (Def.’s Resp. to Pl.’s Opening Claim Cnstrctn. Br. (Doc. #115,
 9 Ex. 1, at 11.) Based on this representation, APC argues that this prosecution disclaimer bars STI
 10 from proposing any claim construction that does not require both “power on” and “load” sensors.
 11 *See e.g., Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1375 (Fed. Cir. 2008);
 12 *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995).

13 “[W]here the patentee has unequivocally disavowed a certain meaning to obtain his patent,
 14 the doctrine of prosecution disclaimer attaches and narrows the ordinary meaning of the claim
 15 congruent with the scope of the surrender.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314,
 16 1324 (Fed. Cir. 2003). A prosecution disclaimer does not apply, however, to an ambiguous
 17 disavowal of subject matter. *Pall Corp. v. PTI Techs. Inc.*, 259 F.3d 1383, 1393-94 (Fed. Cir.
 18 2001), *vacated on other grounds*, 535 U.S. 1109 (2002); *N. Telecom Ltd. v. Samsung Elec. Co.*,
 19 215 F.3d 1281, 1293-95 (Fed. Cir. 2000). There is a “heavy presumption that claim terms carry
 20 their full and ordinary meaning unless the patentee unequivocally imparted a novel meaning to
 21 those terms or expressly relinquished claim scope during prosecution.” *Omega*, 334 F.3d at 1323
 22 (citations and internal quotations omitted). Accordingly, the disavowed statements must be “both
 23 so clear as to show reasonable clarity and deliberateness . . . and so unmistakable as to be
 24 unambiguous evidence of disclaimer.” *Id.* at 1323.

25 When STI made the alleged disclaimer, the claim language containing the relevant
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1 limitation stated as follows:

2 15. A power management method comprising:

3 with a sensor system mounted in a local power distribution apparatus,
 4 sensing whether (A) at least one outlet mounted in the local power distribution
 apparatus and in communication with the sensor is configured to transmit power,
 5 and (B) a load is attached to at least one outlet;

6 . . .

7 STI's Resp. to APC's Reply to its Opening Claim Constrct. Br. (Doc. #127, Ex. Y, at i). After
 8 claim 15 was rejected, STI submitted an appeal brief in 2005, where they made the alleged
 9 disclaimer. STI presented various arguments to distinguish the sensor system in Fung. First, they
 10 argued that the examiner erroneously construed the claimed sensor to be a temperature sensor.
 11 Second, they argued that Fung failed to teach a sensor system that could detect whether an outlet
 12 was configured to transmit power performance (the process recited in step A of claim 15).
 13 Similarly, Fung failed to teach a sensor system that could detect whether an outlet had an attached
 14 load (step B). Following an amendment submitted by the applicants, an interview, and an updated
 search of the prior art, the examiner amended the claim language as follows⁴:

15 15. A power management method comprising:

16 with a sensor system mounted in a local power distribution apparatus,
 17 ~~sensing whether~~ (A) sensing whether at least one power outlet mounted in the local
 power distribution apparatus and in communication with the sensor is configured either
 18 (i) in the "off" state or (ii) in the "on" state to transmit power, and also (B) a load is
attached to sensing whether current is flowing through said at least one power outlet;

19 . . .

20 *Id.* Ex. #EE, at 3-4 ('934 Patent File History, Examiner's Amendment).

21 After reviewing the relevant prosecution history, the court does not find that STI should be
 22 precluded from advancing its construction. The alleged disclaimer did not contain a general
 23 statement that the relevant subject matter necessarily involved power-on and load sensors. Instead,
 24 the disclaimer contained limiting language referring to the particular claim: "the *claimed* sensors in

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26 ⁴ The examiner also added a limitation to the claim and made changes to the existing limitations.

1 the *claimed* sensor system.” The Federal Circuit has noted such statements when concluding that
 2 an applicant’s disclaimer with respect to a particular claim did not apply to other related claims.

3 *Lexion Med., LLC v. Northgate Techs., Inc.*, 292 Fed.Appx. 42, 48 (Fed. Cir. 2008).

4 Furthermore, the viability of the disclaimer is questionable in light of the amendments
 5 made to both sensing substeps recited in the application. For example, the phrase “configured to
 6 transmit power” in substep A was replaced with “configured either (i) in the ‘off’ state or (ii) in the
 7 ‘on’ state.” With respect to substep B, the Examiner deleted the provisional claim language
 8 “sensing whether . . . a load is attached” and replaced it with “sensing whether current is flowing
 9 through [a power outlet].” In each case, the significance of the revision is unclear. Though it is
 10 possible that the examiner simply chose to redefine the two sensors in functional terms through the
 11 revised language, as APC asserts, it is also susceptible to the interpretation that the examiner
 12 sought to avoid specifying a particular type of sensor to accomplish the sensing task. As a result, it
 13 is possible that the claims were allowed for reasons other than the allegedly disclaiming
 14 statements. A reasonable reader of the prosecution history could therefore conclude that STI’s
 15 statement concerning two types of sensors was irrelevant to the issued claim. Thus, the statements
 16 are neither clear nor definitive enough to create a prosecution history disclaimer restricting the
 17 claim’s ordinary meaning.

18 APC argues that “sensor system” is a term that was present in the claim throughout
 19 prosecution and that any related disclaimer should continue to apply. However, the ‘934 patent
 20 defines the sensor system as performing the two processes described thereafter, which were
 21 substantively revised during prosecution. When interpreting a claim term, the court cannot ignore
 22 the context in which it appears. *See Phillips*, 415 F.3d at 1314-15. Moreover, the Federal Circuit
 23 has reasoned that where an alleged disclaimer arose in connection with rejected claims reciting
 24 certain limitations, any resulting disclaimer applies to only those claims reciting the limitations.

25 *Lexion Med., LLC v. Northgate Techs., Inc.*, 2008 WL 4097481, at *4 (Fed. Cir. Aug. 28, 2008)

1 (citing *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1333 (Fed. Cir. 2004)). Thus, even if
2 a particular term still appears in the patent, the relevant issue is whether the limitations underlying
3 the disclaimer (i.e., the language in the application claim that suggested power-on and load
4 sensors) in the rejected claim are present in the final version. The court finds that the subsequent
5 amendments to the claim language make it unclear whether the patent continues to recite these
6 limitations. Hence, the disclaimer should not apply, and STI's claim construction is hereby
7 adopted.

2. (A) sensing whether at least one power outlet mounted in the local power distribution apparatus and in communication with the sensor is configured either (i) in the 'off' state or (ii) in the 'on' state and also (B) sensing whether current is flowing through said at least one power outlet

PROPOSED CONSTRUCTIONS	
STI	Sensing whether at least one power outlet . . . is configured either (i) in the “off” state or (ii) in the “on” state and also sensing whether current is flowing through said at least one power outlet
APC	Sensing whether a specified power outlet from among a plurality of outlets is “on” or “off” by determining whether power is available (i.e., whether voltage is present) on the output side of the relay controlling that power outlet; and separately sensing whether current is flowing through that outlet to a connected electrical load.

The starting point for any claim construction is the claim language itself. *See Vitronics*, 90 F.3d at 1582. The phrasing of the (B) clause of the patent “*said* at least one power outlet” is a reference to the (A) clause. Thus, the parties agree that the claim language requires both sensing steps to be performed on some part of the plurality of power outlets. However, the parties disagree on two matters. First, they dispute whether both types of sensing need to be performed on the same outlet, assuming a plurality of power outlets. Second, they disagree whether sensing can occur either collectively or individually (STI’s position), or whether sensing must take place on each individual outlet (APC’s position).

In *NTP, Inc. v. Research in Motion, Ltd.*, the Federal Circuit interpreted claim language that

1 contained an antecedent relationship. 418 F.3d 1282 (Fed. Cir. 2005). The subject matter involved
 2 a system for integrating existing electronic mail systems with wireless communication networks.

3 *Id.* at 1287. An independent claim recited as follows:

4 1. A system for transmitting originated information from one of a plurality of
 5 originating processors in an electronic mail system *to at least one of a plurality of destination processors in the electronic mail system* comprising:

6 ...
 7 a RF information transmission network for transmitting the originated
 8 information to at least one RF receiver which transfers the originated
 9 information *to the at least one of the plurality of destination processors*;

10 ...
 11 the electronic mail system transmits other originated information from one of
 12 the plurality of originating processors in the electronic mail system *to at least one of the plurality of destination processors in the electronic mail system*
 13 through a wireline without transmission using the RF information transmission
 14 network.

15 *Id.* at 1305 (emphasis added). The court found that the same destination processor must
 16 simultaneously be (1) “in an electronic mail system” as recited in the first and third paragraphs
 17 quoted above, and (2) reachable through an “RF information transmission network” as recited in
 18 the second paragraph. *Id.* at 1306. The court reasoned that the claim language “a RF information
 19 transmission network for transmitting . . . originated information to the at least one of the plurality
 20 of destination processors” in the second paragraph referred to “at least one of a plurality of
 21 destination processors in the electronic mail system” in the first paragraph. This phrasing
 22 suggested an antecedent relationship requiring a destination processor accessible by RF
 23 transmission to also be “in an electronic mail system.” *Id.* (citing *Warner-Lambert Co. v. Apotex*
 24 *Corp.*, 316 F.3d 1348, 1356 (Fed. Cir. 2003)). Notably, the Federal Circuit did not find that one
 25 member of the plurality of processors could be “in an electronic mail system,” while a different
 26 member was reachable by an RF network. This is despite the fact that such a reading is
 permissible under the plain language of the patent, which only discusses the destination processors
 collectively rather than referring to individual members of the group.

1 In this case, the claim language “sensing whether current is flowing through said at least
 2 one power outlet” in the second sensing substep refers to the antecedent “sensing whether . . . at
 3 least one power outlet . . . is configured [on or off]” claim language. The word “said” creates an
 4 antecedent relationship between the clauses in the same way as “the” in *NTP*. While the claim
 5 language technically allows each sensing substep to be performed on different members of the
 6 plurality, the holding in *NTP* suggests this is overcome by the particularizing effect of the
 7 antecedent claiming structure.

8 Turning to the second point of contention between the parties, the court finds that both
 9 types of sensing need not occur for each individual outlet. This is not required by the claim’s plain
 10 language, which only refers to sensing a plurality of power outlets. This is consistent with the
 11 specification. Figure 3 of the patent discloses relay circuit 314, which allows sensing at one or
 12 more outlets at a time by utilizing the appropriate configuration of relays. ‘934 Patent sheet 3.

13 APC proposes that another limitation be construed in the claim language, that the on/off
 14 configuration be ascertained by “determining whether power is available (i.e., whether voltage is
 15 present) on the output side of the relay controlling that power outlet.” While the specification may
 16 disclose this method of sensing, it is not necessarily required by the claims. *See Phillips*, 415 F.3d
 17 at 1323. Moreover, the proposed limitation is inconsistent with the plain language of the claims,
 18 which merely recites that the sensor system detect whether at least one power outlet is configured
 19 to be on or off.

20 Therefore, the court construes the term as: “Sensing whether at least one power outlet . . . is
 21 configured either (i) in the “off” state or (ii) in the “on” state and also sensing whether current is
 22 flowing through said at least one power outlet.”

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24 \\

25

1 **3. Generating at least one power status signal with the local power distribution**
 2 **apparatus based on said sensing by the sensor system**

PROPOSED CONSTRUCTIONS	
STI	Generating at least one power signal with the local power distribution apparatus based on said sensing by the sensor system.
APC	Generating a “power status signal” associated with the specified power outlet that includes in a single signal information regarding both (1) whether a power outlet is actually in the “on” or “off” state it was instructed to be in, and (2) whether current is flowing through that outlet.

8 The “based on” phrasing requires the signaling to reflect information from both sensing
 9 substeps. However, the claim language contains no requirement that a single signal carry the
 10 results of both processes. The “at least one” claim language permits but does not require a signal
 11 carrying both types of information as urged by APC.

12 The specification does not compel a different conclusion. APC argues its interpretation is
 13 necessary to fulfill the purpose of this claim, which relates to diagnosing whether a piece of
 14 equipment has become inoperable. The Federal Circuit has cautioned against such reasoning,
 15 finding that “[t]he court’s task is not to limit the language to exclude particular devices because
 16 they do not serve a perceived ‘purpose’ of the invention.” *E-Pass Techs., Inc. v. 3Com Corp.*, 343
 17 F.3d 1364, 1370 (Fed. Cir. 2003). Even assuming *arguendo* that this contention is legally
 18 permissible, the purpose of the invention as alleged by APC does not require both types of
 19 information to be carried within a single signal.

20 Accordingly, the court adopts the following construction of this phrase: “Sensing whether
 21 at least one power outlet . . . is configured either (i) in the “off” state or (ii) in the “on” state and
 22 also sensing whether current is flowing through said at least one power outlet.”

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4. Power status signal

PROPOSED CONSTRUCTIONS	
STI	A signal that relates to the status of power availability.
APC	A single communicable signal that provides information regarding both (1) whether a power outlet is actually in the “on” or “off” state it was instructed to be in, and (2) whether current is flowing through that outlet, to indicate whether a network appliance connected to that outlet is or is not appropriately receiving electrical operating power.

The preceding discussion addresses the parties' contentions on this term and clarifies the composition of the power status signal. Therefore, the court declines to provide a construction for this term.

5. Power outlet status information

PROPOSED CONSTRUCTIONS	
STI	Information relating to the availability of power at a power outlet.
APC	Information in TCP/IP format regarding both (1) whether a power outlet is actually in the “on” or “off” state it was instructed to be in, and (2) whether current is flowing through that outlet.

As reflected by the parties' proposed constructions, the disagreement over "power outlet status information" relates to the court's interpretation of the preceding language. Thus, consistent with the court's previous construction, the court hereby construes the term as: "Information relating to the availability of power at a power outlet."

B. The '543 Patent

Claim 1:

21 1. An electrical power distribution plugstrip connectable to one or more electrical loads
22 in a vertical electrical equipment rack, the electrical power distribution plugstrip
comprising in combination:

23 A. a vertical strip enclosure having a thickness and a length longer than a width
24 of the enclosure:

25 B. a power input penetrating said vertical strip enclosure;

1 C. a plurality of power outputs disposed along a face of said length of the strip
2 enclosure, each among the plurality of power outputs being connectable to a
corresponding one of said one or more electrical loads;

3 D. a plurality of power control relays disposed in said vertical strip enclosure,
4 each among said plurality of power control relays being connected to said power
input and in **independent power controlling communication** with one or more
corresponding power outputs among said plurality of power outputs;

5 E. a **current-related information display** disposed on said vertical strip
6 enclosure in current-related information-determining communication with at least
one among said power input and said plurality of power outputs; and

7 F. a current-related information reporting system associated with said vertical
8 strip enclosure and being (i) in current-related information-determining
9 communication with at least one among said power input and said plurality of
10 power outputs, and (ii) connectable in current-related information transfer
communication with a separate communications network distal from the
electrical power distribution plugstrip.

11 *Claim 2:*

12 2. The electrical power plugstrip of claim 1 further comprising at least one **intelligent**
13 **power section** disposed in the vertical strip enclosure and in which is disposed at least
one of the plurality of power control relays.

15 *Claim 15:*

16 15. An electrical power distribution plugstrip connectable to one or more electrical loads
17 in a vertical electrical equipment rack, the electrical power distribution plugstrip
comprising in combination:

18 A. a vertical strip enclosure having a thickness, and a length longer than a width
19 of the enclosure;

20 B. a power input penetrating said vertical strip enclosure;

21 C. a plurality of power outputs disposed along an area on a face of said length of
22 the strip enclosure, each among the plurality of power outputs being connectable
to a corresponding one of said one or more electrical loads;

23 D. a plurality of power control relays disposed in said vertical strip enclosure,
24 each among said plurality of power control relays being connected to said power
input and to one or more corresponding power outputs among said plurality of
25 power outputs;

E. a digital current information display disposed on another area of said vertical strip enclosure and adjacent to said plurality of outputs in current-determining communication with at least one among said power input and said plurality of power outputs; and

F. a plugstrip current reporting system (i) associated with the vertical strip enclosure (ii) in **power information** determining communication with at least one among said power input and said plurality of power outputs, and (iii) communicatingly connectable with a distal current reporting system through a communications network external to the electrical power distribution plugstrip.

1. Independent power controlling communication⁵

PROPOSED CONSTRUCTIONS	
STI	Communication related to the flow of power in one instance without regard to the flow of power in another instance.
APC	<p>This term does not cover the use of microcontrollers external to the outlet/relay combinations to control the flow of electricity through the outlets, nor does the term cover systems that include a sole microprocessor for controlling flow of electricity through the outlets.</p> <p>Instead, this term requires, at a minimum, outlet/relay combinations that control the flow of electricity through the use of a plurality of microcontrollers internal to outlet/relay combinations⁶</p>

This phrase appears in claim 1 as follows:

D. a plurality of power control relays disposed in said vertical strip enclosure, each among said plurality of power control relays being connected to said power input and in **independent power controlling communication** with one or more corresponding power outputs among said plurality of power outputs;

Col. 11 ll.1-6 (emphasis added). The parties disagree about whether statements made by STI

⁵ APC has filed a motion for a surreply to STI's reply brief on claim construction (Doc. #157). Because STI raises arguments for the first time in its reply brief to which APC cannot otherwise file a response, that motion is granted. The court has considered the surreply and STI's response (Doc. #158).

⁶ APC has proposed that this term is indefinite under the provisions of 35 U.S.C. § 112 ¶ 2, since one of skill in the art would not be able to determine its scope and meaning. APC stated, however, that it would consider filing a motion on this invalidity issue at an appropriate time in accordance with the court's schedule. Accordingly, the court does not address this issue in the context of claim construction.

1 during prosecution function as a disclaimer for this term. Those statements were made in the
 2 context of application claim 11, which issued as claim 2 in the '543 patent. The application claim
 3 read as follows:

4 The electrical power plugstrip of claim 10 further comprising at least one intelligent
 5 power section disposed in the vertical strip enclosure and in which is disposed at least
 6 one of the plurality of power control relays.

7 APC's Resp. to STI's Proposed Claim Construction Order, Ex. 5 (Appeal Brief to Board of Patent
 8 Appeals and Interferences, '543 Patent File History, Claims Appendix p. i). During prosecution,
 9 STI distinguished application claim 11 from the prior art Schreiber reference by arguing that the
 10 PTO ignored the "intelligent power section" ("IPS") limitation recited in that claim. According to
 11 STI, the PTO erroneously construed the IPS to be a simple outlet/relay combination. STI argued
 12 that the IPS limitation was distinguishable from the Schreiber reference in two ways: "Reading
 13 claim 11 in view of the Specification can allow no other conclusion other than that the claimed
 14 intelligent power section is an **intelligent power module (IPM)** that includes a microcontroller and
 15 independently controls operating power to electrical loads in a vertical equipment rack." *Id.* at 22.
 16 In contrast, Schreiber taught a sole microprocessor that was external to the outlet/relay
 17 combinations. Furthermore, Schreiber actually taught away from independent control of the
 18 outlets/relays because it taught a single master relay that controlled power to all the outlets. *Id.*

19 Reading these statements in context, the court finds that STI's arguments are directed to the
 20 "intelligent power section" limitation in application claim 11/issued claim 2, not the "independent
 21 power controlling communication" limitation in the preceding claim. While STI used the phrase
 22 "independent power control" or some variant in the appeal, it was defining the features of the
 23 intelligent power section, not describing the manner of independent power control. STI made these
 24 arguments in a section of the brief titled "[t]he Cited Combination of References Fails to Teach or
 25 Suggest the Intelligent Power Section Limitation of Claim 11." *Id.* at 22. Throughout the text are
 26 references to the "intelligent power section" limitation. APC is correct that there is an

1 independent-dependent claim relationship between application claims 10 and 11, meaning that as a
 2 general proposition, certain comments directed toward claim 11 *may* apply to claim 10 when it
 3 relates to terms in common. However, STI's prosecution disclaimer is directed to "an intelligent
 4 power section," a term that does not appear in application claim 10. The statements concerning an
 5 additional limitation imposed by a dependent claim cannot be imputed to the independent claim.
 6 In other words, the dependent claim incorporates by reference the independent claim; APC's
 7 argument improperly reverses this relationship.

8 The court's conclusion is supported by the doctrine of claim differentiation. According to
 9 this rule of construction, "different words or phrases used in separate claims are presumed to
 10 indicate that the claims have different meanings and scope." *Karlin Tech. Inc. v. Surgical*
 11 *Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999). There is a "presumption that an
 12 independent claim should not be construed as requiring a limitation added by a dependent claim."
 13 *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006). *See also*
 14 *Nazomi Commc'ns, Inc. v. Arm Holdings, PLC.*, 403 F.3d 1364, 1370 (Fed. Cir. 2005) ("[C]laim
 15 differentiation 'normally means that limitations stated in dependent claims are not to be read into
 16 the independent claim from which they depend.'") (quoting *Karlin Tech.*, 177 F.3d at 971-72)).

17 Applying STI's prosecution disclaimer regarding "intelligent power section" in dependent
 18 claim 2 to "independent power controlling communication" in independent claim 1 would violate
 19 the rule of claim differentiation. Based on the disclaimer, APC proposes that "independent power
 20 controlling communication" in claim 1 should refer to outlet/relay combinations that control the
 21 flow of electricity through the use of a plurality of microcontrollers located inside the outlet/relay
 22 combinations. Under that interpretation, the "intelligent power section" limitation in dependent
 23 claim 2 would become a superfluous term.⁷ Therefore, to avoid rendering claim 2 a nullity, the
 24

25 ⁷ APC's proposed definition for intelligent power section recites similar language containing limitations involving
 26 the use of a microprocessor to independently control power relays/outlets. Perhaps due to the difficulty posed by the claim
 differentiation principle to its proposed constructions, APC defines "intelligent power section" using additional limitations

1 court declines to read subject matter disclaimed during prosecution into the disputed phrase.
 2 However, STI's disclaimer informs the construction of "intelligent power section" as discussed
 3 below.

4 In light of the preceding discussion, the court adopts the following definitions:

5 Independent: "Relating to one power relay, without being affected by the
 6 operation of any other relay."

7 Power-controlling communication: "Communication related to the flow of
 8 power through a relay."

9 **2. Current-related information display**

PROPOSED CONSTRUCTIONS	
STI	current-related information: Information related to current. display: A device that produces a visual representation of textual, alpha-numerical and/or graphical data.
APC	current-related information: Information necessary to quantify or describe current. display: Visual indicator of information related to current.

15 The parties generally agree on the meaning of "current-related information." Because its
 16 meaning is not in dispute, the court declines to construe this term. The parties differ, however, on
 17 what the display communicates. While STI's proposed definition suggests a "visual
 18 representation" of current-related data, it more narrowly argues that the display should report data
 19 measurements: "The definition of the term does not include a single LED that might provide a
 20 visual indication of current conditions, but that is incapable of providing a *measured value*" (STI's Proposed Order 8.) *See also* STI's Claim Constr. Br. 38 ("[E]very disclosure in the specification refers to the 'display' as being capable of displaying the **amount** of current, consistent with the ordinary meaning of the term in the art as set forth in STI's proposed construction").

25 describing the circuitry configuration on a single power controller board. APC provides no basis for these limitations, and
 26 the court declines to incorporate them into its interpretation of "intelligent power section." *See infra.*

1 APC contends that a display merely needs to indicate some information related to current so that a
 2 single LED could constitute a “display.”

3 STI’s interpretation is contrary to the terms plain meaning and usage. In claim 1, the
 4 inventors used “display” without qualification. The claim could describe a display that specifically
 5 reported data in a “textual, alpha-numerical and/or graphical” format, but it fails to do so.
 6 Independent claim 15 recites “a *digital* current information display,” which more closely aligns
 7 with STI’s proposed construction because “digital” commonly relates to numbers.⁸ However, if
 8 this court were to interpret “display” in claim 1 as containing a numerical limitation, under claim
 9 differentiation, it would be unnecessary for claim 15 to specify that the display was “digital.” *See*
 10 *AllVoice Computing PLC v. Nuance Commc’ns, Inc.*, 504 F.3d 1236, 1247 (Fed. Cir. 2007)
 11 (citations omitted) (“[C]laim differentiation takes on relevance in the context of a claim
 12 construction that would render additional, or different, language in another independent claim
 13 superfluous.”); *Phillips*, 415 F.3d at 1314 (“Differences among claims can also be a useful guide in
 14 understanding the meaning of particular claim terms.”).

15 According to STI, the Examiner concluded that a display necessarily reported measured
 16 values so that a light emitting diode could not meet this limitation. The Examiner concluded that

17 the [Schreiber] reference fails to teach a user display disposed on said vertical strip
 18 enclosure in information-determining communication with at least one among said
 19 power input and said plurality of power outputs, whereby a user may observe
 information relative to the amount of current flowing through at least one among the
 power input and said plurality of power outputs.

20 (STI’s Opening Claim Constrctn. Br. (Doc. #97) Ex. N, at 4.) The Schreiber references discloses
 21 “six light emitting diodes . . . that indicate when power is being applied to a particular system.”
 22 While the Examiner indicated that the LED array in Schreiber was not a “display” according to
 23 application claim 10, it does not follow that an LED array (or any other non-numerical visual
 24

25 ⁸ “Digital” is commonly defined as “of or relating to data in the form numerical digits” or “of or in numerical
 26 digits.” Merriam-Webster’s Collegiate Dictionary 10th ed. 2001.

1 indicator) would not be a display according to claim 1. Though application claim 10 ultimately
 2 issued as claim 1, it was significantly broadened. The earlier version of the display limitation reads
 3 as follows:

4 10. An electrical power distribution plugstrip . . . comprising in combination:

5 . . .

6 E. a user display disposed on said vertical strip enclosure and adjacent to the plurality
 7 of power outputs in information-determining communication with at least one among
 8 said power input and said plurality of power outputs, *said user display providing*
 9 *information to a user, the information being related to the amount of current flowing*
 10 *through at least one among the power input and said plurality of power outputs.*

11 STI's Resp. to APC's Surreply (Doc. #158) 4 (emphasis added). Issued claim 1 describes
 12 "information" as "current-related," while the same term in the application claim is defined as
 13 relating to "the amount of current flowing." The narrower limitation corresponding to STI's
 14 proposed interpretation was eliminated during prosecution. In light of the differences made to the
 15 claim term, the comments made by the Examiner during prosecution do not apply.

16 STI also argues that the '543 patent specification discloses various instances where the
 17 display returns specific data. STI's interpretation would improperly limit the claim language based
 18 on the specification. *See Phillips*, 415 F.3d at 1323. Finding that APC's proposed construction
 19 properly conveys the term's unrestricted meaning, the court adopts this definition of "display."

20 **3. Intelligent power section/module**

PROPOSED CONSTRUCTIONS	
STI	A section or module that responds to communication to make power available or not available in one instance without regard to the flow of power in another instance.
APC	Circuitry on a power controller board for independently controlling operating power to power outlets including a microcontroller with associated outlet/relay combinations all on the same board.

21 "Intelligent power section" appears in claim 2 of the '543 patent: "The electrical power
 22 plugstrip of claim 1 further comprising at least one *intelligent power section* disposed in the
 23 vertical strip enclosure and in which is disposed at least one of the plurality of power control
 24

1 relays.” ‘543 Patent col.1 ll.20-23 (emphasis added). Additionally, “intelligent power section” and
 2 “intelligent power module” appear in claims 9 through 14. For example, claim 9 states: “The
 3 electrical power plugstrip of claim 2 wherein said *intelligent power section* comprises an *intelligent*
 4 *power module* having at least one of the plurality of power control relays and the corresponding
 5 power output for such one power control relay.” *Id.* at col.11 l.58-62 (emphasis added).

6 The parties initially dispute whether “intelligent power section” and “intelligent power
 7 module” are interchangeable terms. Claims 9 through 12 suggest they are distinct because an
 8 intelligent power section “comprises an intelligent power module” having certain characteristics.
 9 However, STI provides no further explanation to distinguish these terms. Therefore, the court
 10 provides a common definition.

11 The previous discussion of the prosecution history in connection with “independent power
 12 control communication” provides the basis for the present construction. During prosecution, STI
 13 distinguished the prior art Schreiber reference from the claimed invention based on two features
 14 comprising “intelligent power section”: (1) the use of a microcontroller with the outlet/relay
 15 combinations and (2) the independent control of operating power to the electrical loads through the
 16 outlet/relay combinations. APC’s Resp. to STI’s Proposed Claim Cnstrctn. Order Ex. 5, at 22
 17 (Appeal Brief to Board of Patent Appeals and Interferences). Therefore, STI disavowed any
 18 construction of the term lacking these elements.

19 APC’s proposed construction specifies as an additional limitation that the power section
 20 circuitry be located on the same power controller board. It fails to provide an explanation for this
 21 element. The court concludes that this additional limitation is unnecessary to define the term’s
 22 meaning according to a person having ordinary skill in the art. Therefore, the court adopts the
 23 following definition: “Circuitry for independently controlling power to power outlets that includes
 24 a microcontroller with associated outlet/relay combinations.”

25 \\

26

4. External power manager application

PROPOSED CONSTRUCTIONS	
STI	An external application that is used to manage power.
APC	Application software external to the power strip housing that generates an interface and thereby allows a user to control power to the outlets via communication over a network.

APC argues that the definition proposed by STI is excessively broad and omits representations it made during prosecution. APC relies on the following statement from the file history:

Reading claim 12 in view of the Specification can allow no other conclusion other than that the external power manager application is an application that is *external to the claimed vertical strip enclosure, communicates with an intelligent power (IPM) via a network, and allows a user to control power to the claimed outputs disposed along a face of the vertical strip enclosure.*

APC's Resp. to STI's Proposed Claim Cnstrctn. Order Exh. 5, at 30-31 (Appeal Brief to Board of Patent Appeals and Interferences). Claim 3 of '543 patent, where the disputed term appears, recites the same limitations:

The electrical power plugstrip of claim 2 further comprising an external power manager application external to the vertical strip enclosure in network communication with the intelligent power section disposed in the vertical strip enclosure, whereby a user of the external power manager may control power provided to selectable ones of said plurality of power outputs.

Col.1 ll.24-30. Therefore, the issued claim language already incorporates the details from the prosecution history informing STI's claim interpretation. At the *Markman* hearing, APC acknowledged that its construction essentially reiterates the claim language. The main difference is that the proposed definition requires the application software to generate a user interface. While the court presumes that some sort of user interface is generally necessary to use a software application, the claim language already provides that the power manager should enable the user to control power to the outputs. APC acknowledged the same point during the *Markman* hearing.

1 was not referenced in the prosecution history, so STI did not disclaim any subject matter lacking
 2 this element. The parties' remaining arguments address the issue of infringement, not claim
 3 construction. Therefore, the court declines to further construe this term, finding its meaning to one
 4 of ordinary skill in the art is readily understandable from the context in which it appears.

5 **5. Power information⁹**

PROPOSED CONSTRUCTIONS	
STI	Information related to power.
APC	Information necessary to quantify or describe power, rather than current alone.

9
 10 The dispute over this term turns on whether current information alone can constitute
 11 "power information." The parties agree that "power" is an electrical term defined as the
 12 multiplicative product of current and voltage. "Power" and "current" are therefore distinct
 13 concepts, and current alone is insufficient to determine power. This is consistent with the plain
 14 meaning of the claim language. Claim 15 of the '543 patent discloses both "current determining
 15 communication" and "power information determining communication." Col.12 ll.40-45. It is
 16 presumed that different words used in a claim mean different things. *See Applied Med. Res. Corp.*
 17 *v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006). Permitting current information
 18 to satisfy the power information limitation would eliminate the distinction suggested by the plain
 19 language of these terms. The court finds that APC's proposed definition adequately represents the
 20 relationship between power and current and hereby adopts its construction.¹⁰

21 \\

22 \\

23
 24 ⁹ This construction also applies to the term "power-related information," which appears in claim 1 of the '461
 patent. The constructions and analysis presented by the parties are the same.

25
 26 ¹⁰ Whether a current measurement alone can qualify as "power information" where the voltage is known to be
 constant, as STI argues, raises a question under the doctrine of equivalents that is not properly before the court at the present
 time.

1 **C. The '461 Patent**2 *Claim 1:*

- 3 1. A remotely manageable power management output strip comprising in combination:
 - 4 A. a power strip housing;
 - 5 B. a **plurality of power inputs** disposed in the power strip housing;
 - 6 C. a first plurality of power outputs disposed in the power strip housing, each among the first plurality of power outputs being connectable to one or more electrical loads external to the power strip housing and connected to a first power input among the **plurality of power inputs**;
 - 7 D. a second plurality of power outputs disposed in the power strip housing, each among the second plurality of power outputs being connectable to one or more electrical loads external to the power strip housing and connected to a second power input among the **plurality of power inputs**;
 - 8 E. a communications bus disposed in the power strip housing;
 - 9 F. a plurality of **power control sections** disposed in the power strip housing, each said power control section being in communication with the communications bus and thereby in power controlling communication with one or more corresponding power outputs among the first or second plurality of power outputs;
 - 10 G. a communications system disposed in the power strip housing, being in communication with said communications bus, and having a communications processor system in communication with (i) said communications bus; (ii) said plurality of **power control sections** through the communications bus; (iii) a communications port connectable to an external communications link external to the power strip housing;
 - 11 H. a display disposed in the power strip housing in communication with the communications bus; and
 - 12 I. a current determining section disposed in the power strip housing in communication with the communications bus, whereby the current determining section may communicate **power-related information** to said display.

21 '461 Patent col.21 1.44 - col.22 1.17.

22 **1. Plurality of power inputs**

24 PROPOSED CONSTRUCTIONS	
25 STI	Two or more power inputs.
26 APC	Two or more power cords each having a line, neutral, and a ground feed.

1 Claim 1 recites a “remotely manageable power management output strip” including a
2 “plurality of power inputs disposed in the power strip housing.” ‘461 Patent col.21 ll.44-49. The
3 parties agree that Figure 1 indicates a power input consisting of a line, a neutral, and a ground.
4 ‘461 Patent Sheet 1. The parties dispute whether a “plurality of power inputs” requires a first set
5 of line, neutral, and ground feeds, and at least one other set of line, neutral, and ground feeds (as
6 APC contends), or whether one common neutral and ground feed and at least two lines bundled
7 together in a single cord are sufficient to meet this claim term (STI’s construction). Figure 1 does
8 not resolve this question, as it describes only a single line, neutral, and ground feed, and does not
9 indicate whether these wires are bundled together in a single cord.

10 To establish the meaning of this term, STI relies on the testimony of its expert that a person
11 having ordinary skill in the art would consider a plurality of power inputs to consist of a neutral, a
12 ground, and more than one line feed. APC does not directly refute this testimony. Instead, it
13 argues that a “plurality” of power inputs requires that each member of the plurality consist of a
14 discrete set of neutral, ground, and line wires. It offers inadequate support, however, for the
15 assumption that members of a plurality could not share certain elements through a bundled
16 configuration.

17 The specification fails to clarify the meaning of this term. According to APC, it refers to a
18 plurality of power inputs as a means of providing redundant power to equipment, which would
19 require the inputs to be completely independent of each other. The portion of the specification
20 offered in support of this construction recites as follows:

21 In general, remote power management embodiments of the present invention are
22 configurable and scaleable The following list of customer requirements can all be
23 met with minimal hardware, and no software changes: . . . variable number of power
input feed *configurations* to support redundant power to critical network equipment (up
to 4 input feeds). . . .

24 ‘461 Patent col.20 ll.19-36. This suggests that power redundancy is not an inherent feature of the
25 invention. Rather, the power management system must be configured to support a backup power

1 input, if the customer requests it.

2 The court adopts STI's construction of this term, which conforms to the term's natural
3 meaning to a person skilled in the relevant art.

4 **2. Power control sections**

5 PROPOSED CONSTRUCTIONS	
6 STI	Sections that control power.
7 APC	This term is written in means-plus-function format and its construction is governed by 8 the provisions of 35 U.S.C. § 112 ¶ 6. The structure disclosed in the specification that 9 defines this means-plus-function term — shown by the “power controller boards” 802, 804, and 806 in Figure 8 of the ‘461 patent — includes at least a microcontroller, power control relays, and associated outlets all located on the same printed circuit board.

10 As an initial matter, the parties disagree whether this should be construed as a “means-plus-
11 function” term under 35 U.S.C. § 112, ¶ 6. A means-plus-function claim expresses a “means” for
12 performing a specified function, without reciting the precise structure for performing that function.
13 35 U.S.C. § 112, ¶ 6. Using the term “means” is an important factor in determining whether a
14 claim is in this format. “[T]he presumption flowing from the absence of the term ‘means’ is a
15 strong one that is not readily overcome.” *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382
16 F.3d 1354, 1358 (Fed. Cir. 2004). Conversely, a limitation that does not contain this language is
17 presumed not to follow the means plus function format. *Personalized Media Commc'ns, LLC v.*
18 *Int'l Trade Comm'n*, 161 F.3d 696, 703-04 (Fed. Cir. 1998). “In deciding whether either
19 presumption has been rebutted, the focus [is] on whether the claim as properly construed recites
20 sufficiently detailed structure to avoid the ambit of § 112, ¶ 6.” *Id.* at 704 (citations omitted). The
21 presumption against the format can be overcome, however, if “the claim term fails to ‘recite
22 sufficiently definite structure’ or else recites a ‘function without reciting sufficient structure for
23 performing that function.’” *CCS Fitness Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir.
24 2002) (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

25 APC argues that “power control sections” is a phrase merely reciting the function of
26

1 controlling power, and that “section” is analogous to “means” insofar as it fails to recite any
 2 structure. STI argues that the presumption against construing the phrase as a mean-plus-function
 3 claim is not overcome because sufficient structure is disclosed by the claim language, which
 4 describes (1) that the “power control section” is disposed in the power strip housing; (2) that the
 5 power sections are communicating with a communication bus; and (3) that they are in power
 6 controlling communication through that bus with one or more power outputs.

7 The court finds that the presumption against construing the phrase “as a mean-plus-
 8 function claim” is not overcome. Thus, section 112, paragraph 6, has no application. In addition,
 9 the language in Claim 1-F recites adequate structure in describing (1) that the “power control
 10 section” is disposed in the power strip housing; (2) that the power sections are communicating with
 11 a communication bus; and (3) that they are in power controlling communication through that bus
 12 with one or more power outputs. The term is, therefore, sufficiently clear on its face.

13 **3. Power-on status determination circuit**

PROPOSED CONSTRUCTIONS	
STI	Circuitry that determines whether power is expected to be available.
APC	Circuitry that confirms whether power is being supplied to a particular power output.

17 This term appears in claim 3, which states that “the power-on status determination circuit
 18 may report power-on status of said corresponding power output through said communication bus.”
 19 ‘461 Patent col.22 l.26. According to STI, because the claim does not refer to the availability of
 20 power at an output, it must relate to whether power is expected to be available at an outlet.

21 The court does not find this construction persuasive. The claim plainly refers to the status
 22 of power at an output. It makes no mention of an expectation that power will be available at the
 23 outlet. The specification provides that “[t]he power-on status of each relay output to the power
 24 outlet sockets is sensed and communicated back to the internal I2C-bus.” Col.2 ll.21-23. Like the
 25 claim language, the specification makes no mention of whether, through sensing at the power

1 output, the plugstrip determines whether power is “expected” to be available at an outlet. Finding
 2 APC’s construction to properly convey the ordinary meaning of the term to one skilled in the art,
 3 the court adopts it.

4 **4. Power related information**

5 PROPOSED CONSTRUCTIONS	
6 STI	Information related to power.
7 APC	Information necessary to quantify or describe power, rather than current alone.

8
 9 The examination and analysis of this term is the same as power information in the ‘543
 10 patent. Accordingly, the court finds that APC’s construction adequately represents the relationship
 11 between power and current and hereby adopts its construction.

12 **5. Display**

13 PROPOSED CONSTRUCTIONS	
14 STI	display: A device that produces a visual representation of textual, alpha-numerical 15 and/or graphical data.
16 APC	display: Visual indicator of information related to current.

17 The examination and analysis of this term is the same as display in the ‘543 patent.
 18 Accordingly, the court finds that APC’s construction properly conveys the term’s unrestricted
 19 meaning and hereby adopts its construction of display.

20 **6. A current display mounted in association with the power strip housing is in
 21 current-determining communication with at least one among the plurality of
 22 power outputs.**

23 PROPOSED CONSTRUCTIONS	
24 STI	The current display mounted in association with the power strip housing is in current- determining communication with at least one among the plurality of power outputs.

1	APC	A “display” located on or near the housing that receives data communicated from sensors directly associated with a power output or outlet in response to requests or commands for that data wherein the data is indicative of the current flowing through that power output or outlet.
2		

3 This term appears in claim 8 of the ‘461 patent, which provides as follows:

4 **F. a current display mounted in association with the power strip housing in**
5 **current-determining communication with at least one among the plurality of**
6 **power outputs;** whereby an external power manager and the network communications
7 module may exchange, through the first external network communications port and an
8 external network link, information relating to the intelligent power sections in the
9 power strip housing.

10 Col.23 ll.9-16. The parties agree that the claim language requires the display to communicate with
11 at least one power output but does not require communication with all the power outputs. APC
12 provides no support for the additional limitations reflected in its proposed construction relating to
13 the display receiving data from a sensor. APC argues that its construction is necessary because
14 “STI plans to argue that a display that communicates only with the input can meet these
15 limitations, and APC disagrees.” Resp. to STI’s Proposed Claim Cnstrcn. 13. This raises an
16 infringement contention not properly before the court at this time. Moreover, STI has disavowed
17 such a construction. Resp. to APC’s Proposed Claim Cnstrcn. 14.

18 The court therefore declines to issue a construction for this term, finding that it raises no
19 actual dispute between the parties and that its meaning is readily apparent to one having ordinary
20 skill in the art.

21 **7. The current display mounted in association with the power strip housing is in**
22 **current determining communication with the plurality of power outputs**

21 22 23 24 25 26 PROPOSED CONSTRUCTIONS	
STI	The current display mounted in association with the power strip housing is in current-determining communication with the plurality of power outputs.
APC	A “display” located on or near the housing that receives data communicated from sensors directly associated with each of the power outputs or outlets in response to requests or commands for that data wherein the data is indicative of the current flowing through each and every output or outlet.

1 This term appears in claim 14, which depends on claim 8 discussed above. The only
 2 difference between the two phrases is that claim 14 refers to measuring current for “the plurality of
 3 power outputs,” while claim 8 refers to “at least one among the plurality of power outputs.” As
 4 with its prior finding, the court finds the term’s meaning to a person of ordinary skill in the art to
 5 be apparent from its context. Accordingly, it issues no construction for this term.

6 **D. ‘442 Patent**

7 *Claim 10:*

8 A power distribution method comprising the steps of:

9 energizing an input power line to power-up a first group of power outlets on a
 10 power distribution system;

11 initializing the power distribution system, initializing including the steps of:

12 **programming** a normal-threshold value into the **power distribution**
 13 **system;**

14 **programming** an overload-threshold value into the **power distribution**
 15 **system;**

16 **programming** an under-voltage threshold value into the **power**
 17 **distribution system;** and

18 controlling a plurality of relays to actuate to a conductive state in accordance with
 19 a predetermined sequence and a predetermined delay to sequentially power-on
 20 a second group of power outlets on the power distribution system.

21 ‘442 Patent col.10, ll.40-56 (emphasis added).

22 **1. Programming**

PROPOSED CONSTRUCTIONS	
APC	Inputting a value into the power distribution system. This inputting of a value can be accomplished by a component within or associated with the system, by a human user of the system, or in any other way.
STI	Setting, by an operator, of an adjustable parameter into a pre-existing, operable power distribution system (<i>i.e.</i> , not (i) predetermining or fixing a value in a component prior to system assembly or (ii) inserting a fixed-value chip into a sub-assembly).

21 As their proposed constructions demonstrate, the parties agree that “programming”
 22

1 involves entering a value into the system. They disagree, however, on who performs the
2 programming. STI argues that only operator programming is contemplated by the '442 patent
3 because the purpose of the patent is to allow the end-user/purchaser/operator to input power
4 threshold values for his or her specific network set-up. APC contends that programming is not
5 limited in any way within claim 10, and as such, includes manufacturer as well as operator/end-
6 user programming.

7 The language of claim 10 recites no restrictions or limitations on who conducts the
8 programming of the three threshold values or how the programming is performed. No where does
9 claim 10 specifically mention operator or manufacturer programming. Accordingly, the court finds
10 that STI's proposed limitation that programming can only be performed by an operator is
11 inconsistent with the plain language of the claim. *See Vitronics*, 90 F.3d at 1582 (the starting point
12 for any claim construction is the claim language itself).

13 Although the plain language of the claim is without limitation, STI argues that the preferred
14 embodiments of the '442 patent contemplate only operator programming. *See* '442 Patent col.7
15 ll.57-59 ("[T]he operator can program the power strip with a number of system parameters and
16 operating configurations."). Further, STI contends that the heart of the '442 patent is operator
17 manipulation of the threshold values to suit each individual operator's fluctuating needs. Thus, STI
18 argues that in light of the preferred embodiment explaining an operator's programming of values
19 into the system, its construction is the only construction that aligns with the patent specification.
20 However, the preferred embodiment does not state that only an operator can perform the threshold
21 value programming functions. Thus, STI's construction places limitations upon the '442 patent
22 that are not in the patent itself.

23 Additionally, STI's limitation on "programming" would contradict other disclosures in the
24 '442 patent specifications that disclose that the manufacturer could pre-program the device with a
25 component in the course of assembling the unit. Programming by the manufacturer through the

1 incorporation of components appears in the preferred embodiments as follows:

2 An under-voltage sensor circuit is coupled to the micro-controller and can provide a reset
 3 signal to the micro-controller over line 62. . . . *For example, the predetermined
 under-voltage threshold value can be programmed to 4.6-volts.*

4 *Id.* at col.6 1.65 - col.7 1.13 (emphasis added). APC's technical expert, Dr. William Avery opined
 5 that this preferred embodiment description discloses manufacturer programming. Doc. #95, Ex. #3
 6 (Avery Dep. 203-04). Specifically, Dr. Avery testified that this pre-programmed component is a
 7 manufacturer programmed limit that could not be changed or re-programmed by the end-
 8 user/operator. *Id.* Such a system would allow the manufacturer to pre-program under-voltage and
 9 over-voltage threshold values at extreme values that could prevent potential operator error.
 10 Accordingly, the court finds that the preferred embodiments depict manufacturer, as well as
 11 operator, programming.

12 In summary, there is nothing in the claim language about programming or specification of
 13 the power strip that limits programming solely to an operator. Thus, the court finds that
 14 programming necessarily includes participation by the manufacturer to be consistent with the
 15 invention's purpose. *See On Demand Machine Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1344
 16 (2006) ("[E]ach term must be construed to implement the invention described in the
 17 specification Care must be taken lest a word-by-word definition, removed from the context of
 18 the invention, leads to an overall result that departs significantly from the patented invention.")
 19 (citing *Phillips*, 415 F.3d at 1316; *Autogiro Co. of Am. v. United States*, 384 F.2d 391 (Fed. Cir.
 20 1967)). *See also Phillips*, 415 F.3d at 1316 ("The construction that stays true to the claim language
 21 and most naturally aligns with the patent's description of the invention will be, in the end, the
 22 correct construction.") (quoting *Renishaw PLC v. Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed.
 23 Cir. 1998)). Accordingly, the court agrees with APC's construction of programming and adopts
 24 that construction.

25 \\

26

2. Power distribution system

PROPOSED CONSTRUCTIONS	
APC	A system for distributing power.
STI	A pre-existing system operable to distribute power.

5 APC's construction derives from its interpretation that programming can occur during
6 manufacture before the power strip is fully assembled. STI argues, however, that programming
7 must occur on an assembled device. STI's argument is foreclosed by the court's construction that
8 programming can be performed by the manufacturer through incorporating a component already
9 containing a programmed value into the power distribution system before the power strip is
10 completely assembled. Additionally, STI's proposed construction erroneously excludes the
11 preferred embodiment example wherein the manufacturer programs the system to include an
12 under-voltage threshold value prior to assembly. *See* '442 patent, col.6 1.65 - col.7 1.13. In light of
13 the previous interpretation of "programming" and the disclosures in the specification, the court
14 concludes a "power distribution system" refers to a system for distributing power.

3. **Into / on**

PROPOSED CONSTRUCTIONS	
APC	These terms need not be construed.
STI	into: physically introducing into or inserting within on: physically attached or mounted to

20 The parties do not suggest that these terms have a special meaning in the relevant art.
21 Therefore, they need not be construed because their meanings are easily understood in light of the
22 court's other findings.

23 \\\
24 \\\

E. '442/'891 Patents¹¹

1. Power supply

PROPOSED CONSTRUCTIONS	
APC	Any source of electrical power.
STI	A device that converts voltage from one type to another.

The parties agree that during prosecution of the later-issued ‘891 patent, the Examiner found that a prior art reference to a battery met the “power supply” limitation of the application claim. STI cites to authorities holding that for prosecution disclaimer to apply, it is the applicant — not the Examiner — who must disclaim the subject matter. However, the relevant issue is not whether APC disclaimed certain subject matter during prosecution or disavowed the ordinary meaning of “power supply.” Rather, APC cites to the Examiner’s statement as evidence of the meaning of the term, since an Examiner is presumed to be skilled in the art relevant to the patent application he reviews. STI’s argument that the prosecution history of the ‘891 patent should not apply because it was later-issued is also unavailing. In *Microsoft Corporation v. Multi-Tech Systems, Inc.*, 357 F.3d 1340, 1348 (Fed. Cir. 2004), the Federal Circuit concluded that a court could rely on the prosecution history of a sister patent to construe the claims of a patent that had the same specification. The parties do not dispute that the ‘891 and ‘442 patents share a common specification.

Claim 1 recites both a “power source” and a “power supply.” STI argues that interpreting the latter as a type of power source would violate the presumption that differing terms used in a claim have differing meanings. *See Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n.3 (Fed. Cir. 2006). However, the plain meaning of the claim language suggests that “power source” and “power supply” are used to distinguish between primary and secondary

¹¹ The '891 patent application was filed as a continuation of the '442 application. They share a common specification. The parties agree that these may be resolved by referring to claim 1 of the '442 patent.

1 sources of input power, respectively:

2 An *input power source* sensor circuit . . . to receive primary input power from the
 3 *power supply* and secondary input power from a secondary *power source*, whereby the
 4 input power source sensor circuit provides the primary input power to the
 5 micro-controller and if the primary input power fails, the input power source sensor
 6 circuit provides the secondary input power to the micro-controller.

7 ‘442 patent col.9 ll.53-61. Therefore, construing “power supply” as a type of power source will not
 8 render another claim term redundant.

9 In support of its interpretation, STI also argues that the specification consistently uses the
 10 phrase “AC to DC power supply.” The claims, however, merely recite “power supply” without
 11 qualification. Additionally, the claims fail to discuss the voltage conversion feature emphasized by
 12 STI. In light of the plain meaning of the term, the court finds that STI’s reliance on the
 13 specification risks the error of importing a claim limitation from the specification.

14 Finally, STI cites to a number of technical dictionaries that support its interpretation. In
 15 *Phillips*, the Federal Circuit noted that “extrinsic evidence may be useful to the court, but it is
 16 unlikely to result in a reliable interpretation of patent claim scope unless considered in the context
 17 of the intrinsic evidence.” *Phillips*, 415 F.3d at 1319. STI cites to extrinsic evidence that is
 18 inconsistent with the meaning of “power supply” suggested by the claim language and the
 19 prosecution history. Moreover, APC cites other dictionaries (albeit not technical) supporting its
 20 interpretation. Therefore, the court finds the extrinsic evidence cited by STI is not dispositive.

21 In light of the foregoing, the court defines “power supply” as “a source of electrical power.”

22 **2. Predetermined**

PROPOSED CONSTRUCTIONS	
APC	No construction is needed.
STI	Fixed at an earlier time than, or determined before or in advance of.

23 This term occurs in claim 1 of the ‘891 and ‘442 patents in various instances, such as:
 24 “[A]n undervoltage sensor coupled to the micro-controller and adapted to receive a *predetermined*
 25

1 voltage value from the power supply and being responsive to the *predetermined* voltage value
 2 falling below a *predetermined* threshold value by providing a reset signal to the micro-controller.”
 3 ‘442 patent, col.10 ll.4-9 (emphasis added). The parties agree that “predetermined” can mean
 4 “determined before or in advance of.” The parties disagree on APC’s use of the term “fixed” in its
 5 proposed construction to the extent that it suggests that the value cannot change. However, the
 6 claim language quoted above suggests that the predetermined voltage value is not permanently
 7 fixed. Even though the voltage value is “predetermined,” it is still capable of falling below a
 8 threshold value. The court finds that the term “predetermined” requires no construction.

9 **3. Input power source sensor circuit**

PROPOSED CONSTRUCTIONS	
APC	Circuitry that receives two sources of power, and that can provide power to the microcontroller from either source.
STI	An electronic device that detects whether the power supply connected to the circuit has failed and provides an action in response.

14 Claim 1 recites:

15 an **input power source sensor circuit**, coupled intermediate the power supply and the
 16 micro-controller, to receive primary input power from the power supply and secondary
 17 input power from a secondary power source, whereby the **input power source sensor**
 18 **circuit** provides the primary input power to the micro-controller and if the primary
 19 input power fails, the input power source sensor circuit provides the secondary input
 20 power to the micro-controller

21 ‘442 Patent col.9 ll.53-61. APC does not challenge STI’s contention that in the pertinent field of
 22 art, “sensor” and “sensor circuit” refers to “an electronic circuit that monitors some aspect of an
 23 electronic component environment and provides in response either information or an action
 24 differing in kind from the monitored phenomenon.” Under APC’s construction, however, the
 25 circuitry could passively route power from multiple sources without responding to a change in the
 26 environment. This would eliminate the “sensor” limitation from the claim term.

27 STI’s interpretation better accords with the sensor circuit’s function described in the claim,
 28 which provides that “if the primary input power fails, the input power source sensor circuit

1 provides the secondary input power to the microcontroller.” *Id.* at col.9 ll.59-61. While the patent
 2 nowhere explicitly indicates that the sensor circuit monitors whether a power supply connected to
 3 the circuit has failed, that feature necessarily follows from the fact that it is a “sensor” circuit.
 4 Moreover, the claims and specification consistently disclose that when the primary power supply
 5 fails, the sensor circuit provides secondary power in response. *Id.* at col.3 ll.1-12; col.6 ll.9-16.
 6 Finding that STI properly defines the function of an “input power source sensor circuit” according
 7 to one having ordinary skill in the art, the court adopts its construction.

8 **4. Primary / secondary / if**

PROPOSED CONSTRUCTIONS	
APC	“Primary” and “secondary” mean “first” and “second,” respectively. “If” requires no construction.
STI	“Primary” means “the first to be utilized if operating properly.” “Secondary” means “the second to be utilized if the primary fails.” “If” means “in the event that or on condition that.”

13 These terms appear in Claim 1 of the ‘442 patent as follows:

14 an input power source sensor circuit, coupled intermediate the power supply and the
 15 micro-controller, to receive *primary* input power from the power supply and *secondary*
 16 input power from a secondary power source, whereby the input power source sensor
 17 circuit provides the *primary* input power to the micro-controller and if the *primary*
 18 input power fails, the input power source sensor circuit provides the *secondary* input
 19 power to the micro-controller

20 ‘442 Patent col.9 ll.53-61. According to STI, primary and secondary designate a redundant
 21 relationship between the two power inputs. Under APC’s interpretation, these are merely ordinal
 22 terms, as in first, second, third, etc. It argues that while the claim requires the secondary input to
 23 provide power if the primary fails, this does not exclude the possibility that the secondary input
 24 provides power even if the primary has not failed.

25 The parties do not contend that these terms have a unique meaning in the relevant art.
 26 Therefore, the court consults a general use dictionary to clarify their meaning. *Phillips*, 415 F.3d at
 1321 (“Dictionaries or comparable sources are often useful to assist in understanding the

1 commonly understood meaning of words and have been used both by our court and the Supreme
 2 Court in claim interpretation.”). Contrary to APC’s proposed constructions, the court is unable to
 3 locate a definition of primary or secondary that employs these words in a strictly ordinal sense.
 4 However, STI’s construction does find support in the dictionary: “primary” is defined as
 5 “something that stands first in rank, importance, or value: fundamental,” while “secondary” is
 6 defined as “of second, rank, importance, or value . . . auxiliary.” *Merriam-Webster’s Collegiate*
 7 *Dictionary* 923, 1051 (10th ed. 2001). These meanings are consistent with a redundant
 8 relationship between the primary and secondary power inputs where they are main and backup
 9 sources of power, respectively. If these were merely alternate sources of power, as APC contends,
 10 they should have been denoted as the “first” and “second” sources, as suggested by its
 11 construction. Tellingly, the drafters used “first” and “second” elsewhere in the claim. ‘442 Patent
 12 col.9 ll.42-43 (“a first group of power outlets and a second group of power outlets”).

13 The court also consults the specification to understand how these terms are used in the
 14 patent. *Phillips*, 314 F.3d at 1315. APC’s interpretation is contradicted by the specification, which
 15 provides that “[t]he input power source sensor circuit *normally* operates from *primary* DC input
 16 power *[I]n the event* of a failure of the AC to DC power supply, the *secondary* DC input
 17 power can be provided by the input power source sensor circuit to power the micro-controller.” *Id.*
 18 at col.6 ll.9-16 (emphasis added). This phrasing is inconsistent with the scenario proposed by APC
 19 where the secondary power input provides power even though the primary has not failed.

20 Finding STI’s interpretation to be consistent with common usage and the specification, the
 21 court adopts its construction.

22 **5. First group of power outlets / second group of power outlets**

PROPOSED CONSTRUCTIONS	
APC	Two groups of power outlets.
STI	The first group of power outlets is different than the second group of power outlets.

STI argues that the two groups of power outlets are “different” from each other but provides no explanation. No clarity is added to the claim language by recognizing such a vague distinction. Moreover, aside from the semantic confusion over the term “different,” the parties’ disagreement over the meaning of this term is unclear. The court concludes that these terms need not be construed at this time, as their meaning is sufficiently clear from the context in which they appear.

V. Conclusion

IT IS THEREFORE ORDERED that the disputed claim terms are to be construed consistent with the court's order herewith.

IT IS FURTHER ORDERED that APC's motion to file a surreply (Doc. #157) is GRANTED.

IT IS SO ORDERED.

DATED this 16th day of April, 2010.

Elkire

**LARRY R. HICKS
UNITED STATES DISTRICT JUDGE**